

STATEMENT BY ROGER G. KENNEDY, DIRECTOR, NATIONAL PARK SERVICE, DEPARTMENT OF THE INTERIOR, BEFORE THE SUBCOMMITTEE ON NATIONAL PARKS AND PUBLIC LANDS, HOUSE COMMITTEE ON RESOURCES, CONCERNING THE OVERSIGHT OF THE SCIENTIFIC RESEARCH PROGRAM OF THE NATIONAL PARK SERVICE.

FEBRUARY 27, 1997

Mr. Chairman and members of the Subcommittee, I appreciate the opportunity to present this testimony, and we appreciate the attention you are paying to the role of research and resource management in the National Park Service by convening this hearing.

The National Park Service was established to manage some of the nation's most impressive and important natural and cultural features. The "Organic Act" of 1916 directs the National Park Service to conserve the scenery, and natural and historic objects and wild life, of National Parks for future generations. In 1916 the task was largely one of protecting spectacular examples of isolated scenery and wildlife from poaching, lumbering and mining. The accompanying task was to provide access to these resources for enjoyment in a way that left them unimpaired for all future generations of Americans.

When Congress provided this dual mission in the NPS Organic Act of 1916, no one could know then exactly what these tasks would entail in the years to come. Today the 374 units of the park system that cover 83 million acres are often set in economically developing regions. Many are subject to the impacts of urban and suburban encroachment, which affects watersheds, airsheds, viewsheds, and plant and animal pathways. In this modern landscape most parks are like islands.

The 275 million visits from the public to parks each year also impact park resources. To meet the challenge of managing visitation and other impacts, a strong scientific effort is needed to understand the best ways to protect the resources.

Congress has recognized the fragility of our nation's natural resources by enacting over the past 30 years such important legislation as The National Environmental Policy Act, The Clean Air Act, The Clean Water Act, and The Endangered Species Act. These acts help protect the nation's resources, including those of the national parks. The implementation of these acts requires a high degree of technical expertise, analysis, and documentation from public land management agencies. To do the job right we need to provide the public with an excellent science program.

Our understanding of ecology has progressed a great deal since 1916. We have learned how complex are the important relationships within natural systems and we have learned about the points of vulnerability that require the most vigilance and care. We agree that it is fundamentally important to bring our understanding of natural systems into the management of our National Parks, objectively and professionally. The public is entitled to a science program that will provide it with useful and accurate information about park resources.

Sound factual information, the essence of science, must be the foundation for any prudent land management decision. Because NPS must make many controversial decisions--by definition decisions that do not please everyone--the science that underpins those decisions will be constantly in question. Decisions based on science have been, are, and will be controversial both within and outside the Service. All scientists do not agree on everything. It is essential for Congress and the NPS to have an ongoing dialogue about our successes and our failures in living up to the expectations of the American public.

Over the years many individuals and a number of outside review panels have proposed policies for the NPS science program. The origin of the NPS science program is

usually traced to the 1930's and George Wright. Wright identified the need for inventorying the system's resources and for making science a necessary basis for good stewardship of its wildlife. Wright started the program with his own money for the first two years and died in a car accident in 1936. After a period of Civilian Conservation Corps funding the entire effort dwindled to 3 scientists by the end of World War II. The program sputtered until the 1960's and the issuance of two reports: the Leopold Report (1963) on wildlife management and the Robbins Report (1963) on research in the National Parks. These reports were issued as a result of controversy over the NPS culling of the elk herd in the northern range of Yellowstone NP. These reports spurred the creation in 1967 of the Office of Natural Science Studies and a period of slow growth of both research and resource management programs through the early 1990's.

Under many administrations some progress was made, but not enough. Parks now have Resource Management Plans with lists of research and resource management projects in stated priorities that are needed to understand and address resource threats. We have completed Natural and Cultural Resources Assessments that are essentially servicewide resource management work-load analyses. These data bases can be used to report on our problems and needs within a park, regional, or Servicewide perspective. We have a strong Natural Resource Inventory and Monitoring program that is efficient and

effective in providing the basic information that identifies what we manage and in developing methodology to tell how they are faring. Inventorying and monitoring is not flashy science nor inexpensive, but it is important.

Our science training program is getting better. In the last two decades we have created the professional resource manager position and developed a Natural Resource Management trainee program that provided 1-2 years of training for 145 new park resource managers. Recently the basic park resource manager position was re-evaluated in order to enhance the professionalism and career opportunities of these valuable resource stewards .

Our Natural Resource Management Program also seeks private sponsorship for resource management projects (\$2 million in the last two years) and we have just announced 4 National Park Science /Canon Legacy Scholarships for dissertations on science topics specific to national park issues.

The effort to better our science program is not limited to our natural resources program. Last year the Service adopted a Social Science Plan in order to better understand all aspects of park visitation, economics, and visitor expectations and satisfaction. The

new visiting Chief Social Scientist reports to our Associate Director, Natural Resource Stewardship and Science. Dr. Machlis, a professor at the University of Idaho, will serve a 3-year term. He will then be replaced by another academic leader in social science.

We have established a record of major scientific contribution in areas such as the role of fire in natural ecosystems, coastal barrier island dynamics, and the influence of exotic species in natural systems. There are many examples of NPS science determining issues important to park preservation: air quality impacts at Grand Canyon, the restoration of water quality and quantity in the Everglades, the management of off-road vehicles at Cape Cod and Fire Island National Seashores, and the removal of exotic species such as burros at several Southwestern parks, to name a few.

Lets talk about reports from governmental and private sources that show the need for greater scientific underpinning of the management of park resources and visitor services. It's a matter of priorities. The press of increased visitation to parks and our corresponding focus on visitor services competes for limited resources. The cost of new construction of facilities as well as the corresponding maintenance necessary for

large infrastructure often leads Superintendents to divert resources away from science, toward other pressing needs. At the park level we often have “brushfires” of the moment; as a result we neglect investment in science until a crisis develops. Good science cannot be a “brushfire” activity.

Science has never been an explicit mission of the National Park Service, although various reviews have recommended that research become an integral mandate for park management. In 1993, the Secretary of the Interior created the National Biological Survey (NBS), in part to consolidate all Interior research programs into one research agency, and in part to answer some of the criticism that had been directed at the NPS science program. One of these criticisms was that the research of scientists was managed by park superintendents. The creation of NBS solved this problem as it resulted in the transfer -- not the eradication-- of roughly \$20 million and 168 researchers and technicians, or roughly 1.6% of the NPS operational budget to NBS. Resource management programs (roughly 6-8% of the operational budget) remained with NPS, as did our resource managers -- those who apply science to park programs and make recommendations to management.

NBS, now the Biological Resources Division (BRD) of the US Geological Survey

(USGS), is pledged to continue both research and extension services in direct support of national parks. In concert with the three other programmatic divisions (geology, water, mapping), the USGS has a broad range of scientific resources which can be brought to bear on NPS issues. USGS/BRD has already established an Ombudsman Panel to help address NPS concerns. In addition, we have an agreement with USGS/BRD to share funding for technicians, and an annual needs assessment process has been set up to determine how USGS/BRD can best service NPS's needs.

Nevertheless, NPS science needs to go far beyond the available government-conducted research. To provide a larger program of applied science for its managers, NPS has worked with USGS/BRD to initiate a national network of 16 university-based units, called Cooperative Ecosystem Studies Units (CESU's), which build on the former NPS Cooperative Park Studies Units and augment the Cooperative Research Units. USGS/BRD research scientists at cooperating universities will shortly be joined by a NPS senior scientist who will serve not as a practicing researcher but as a broker, contracting officer's representative, and liaison, to find the best source of technical support for park management in a wide array of disciplines (from archeology to education, to communications, to zoology). This individual will also serve as a bridge between park management, USGS/BRD, and university scientists. When suitable units

do not exist, competitive awards will be used to jointly establish new CESUs. Other land-management and science-related agencies will join these units. By joining together in our regional research efforts we believe that federal agencies will, over time, work more efficiently by jointly planning and providing information relevant to their needs.

We are confident that these steps will provide a science program that meets our needs. They will also solve many of the problems found by reviews of the NPS science program.

Over the years, the NPS has adopted increasingly science-driven policies toward management of the most significant biological components of national park ecosystems. *NPS Management Policies* (1988) calls for maintaining “natural environments evolving through natural processes minimally influenced by human actions.” This means managing for native (generally, pre-European contact) ecosystem components and functions “evolving” through time. While the policy tends away from both the earlier mistake of predator control and the problems associated with the culling of prey species, NPS policy allows for management intervention to correct for disturbing

human influences. Because of the pervasiveness of human influences in today's world, few true cases of natural process regulation (or as some see it "hands off") management are practical.

This policy appears most controversial for the management of large mammals, especially predators and ungulates, as these species can have very significant impacts beyond park boundaries. These mammals can proliferate or decline rapidly depending on the changing ecosystem conditions. Their fate stirs very strong emotions among the various publics. Because of the controversy of any management action--either controlling animal herd numbers as at Gettysburg National Military Park currently, or in maintaining free-roaming herds of elk and bison as at Yellowstone, cooperative efforts with state and other federal agencies are common, and full public involvement (via the NEPA process) is the rule.

There is a lot of disagreement among researchers about whether Yellowstone's northern range is overgrazed. My colleagues are prepared to participate in the debate as scientists. Some, like Professor Sam McNaughton of Syracuse University, who recently reviewed Wildlife Policies in the US National Parks by Dr. Fred Wagner and others, say it isn't. Indeed there are many scientists who believe that the elk herd and

the habitat are healthy and productive--despite high numbers of elk resulting from nearly a decade of mild winters. We would be happy to provide you with copies of their work.

In addition, we recently completed a report on a 5-year research program on conditions in the northern range. The findings presented in these peer-reviewed articles suggest that the issue is not the disaster that our critics would contend. We welcome a rigorous and continuous review of these articles and would be happy to provide you with a copy of this report.

We believe that current debate is warranted and healthy, and we have moved to bring new perspectives into the science issues. Last August we hosted a session at the Ecological Society of America on this issue, inviting a new generation of ecologists to consider the appropriate approach to managing this incredible biological resource. In March we will present this issue at the 62nd North American Wildlife and Natural Resource Conference of the Wildlife Management Institute. In September of this year we are inviting both sides of the debate to present their cases to the judgment of their peers at the annual meeting of the Wildlife Society. We believe that this effort will lead to a scientific consensus on the probable outcomes of the alternatives available for the

management of the Northern range.

Beyond science, what many are actively questioning in the elk and bison issues at Yellowstone NP (including the Brucellosis issue) is the park's interpretation and implementation of the natural process regulation policy. We believe our mission, our policies, and our values reflect the overall expressed interests of the American public. In fact, the public strongly supported our management policies for Yellowstone when we put the policies out for public comment in 1988. We will continue to seek public guidance in the application of these policies and values in Yellowstone National Park. In cooperation with other state and federal agencies, we are committed to completing a Draft long-term Bison Management Plan Environmental Impact Statement this summer.

We also understand the need to be in the forefront of utilizing the best science for the basis of our management decisions in what we believe to be the world's best system of natural and cultural parks in the world. We are confident that we are taking steps to make this a reality.

I appreciate your close interest and support to reach this goal. I will be happy to

respond to your questions.